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PROVINCE OF BRITISH COLUMBIA

FORTY-THIRD REPORT

OF THE

PROVINCIAL BOARD OF HEALTH

FOR THE

YEAR ENDED DECEMBER 31ST

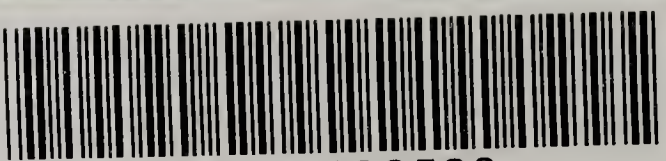
1939



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VICTORIA, B.C. :
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PROVINCIAL BOARD OF HEALTH,

VICTORIA, B.C., October 1st, 1940.

To His Honour E. W. HAMBER,

Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present the Report of the Provincial Board of Health for the year ended December 31st, 1939.

G. M. WEIR,

Provincial Secretary.

PROVINCIAL BOARD OF HEALTH,

VICTORIA, B.C., October 1st, 1940.

The Honourable G. M. Weir,

Provincial Secretary, Victoria, B.C.

SIR,—I have the honour to submit the Forty-third Annual Report of the Provincial Board of Health of British Columbia for the year ended December 31st, 1939.

I have the honour to be,

Sir,

Your obedient servant,

G. F. AMYOT,

Provincial Health Officer.

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HENRY ESSON YOUNG, B.A., M.D., C.M., LL.D.

REPORT *of the* PROVINCIAL BOARD OF HEALTH.

INTRODUCTION.

In this, the Forty-third Report of the Provincial Board of Health, there are recorded activities of particular interest and the progress made during the year.

The Directors of the Divisions of Laboratories, Vital Statistics and Records, Venereal Disease Control, and Tuberculosis Control have contributed extracts from their extensive Annual Reports for the year 1939. These detailed annual divisional reports are available on request.

THE DEATH OF DR. HENRY ESSON YOUNG.

The passing of Dr. Henry Esson Young, late Provincial Health Officer, on October 24th, 1939, brought to a close an active life which, for over forty years, had been spent in service to the people of British Columbia.

Dr. Young was born at English River, Quebec, the son of the Reverend Alexander Young, a Presbyterian minister who had come to Canada from Scotland. His mother was descended from an old Canadian family. Educated through private and public schools, he entered Queen's University at Kingston, Ontario, graduated with a Bachelor of Arts degree and proceeded to McGill Medical College at Montreal for his medical course.

Dr. Young was house-man to the late Sir William Osler at the University of Pennsylvania and afterwards spent eighteen months in postgraduate work at London and Guy's Hospitals, London, England.

His first association with public life in British Columbia started in the far north when he represented Atlin constituency in the Legislature. It was there that Dr. Young spent some of the most colourful years of his useful life.

He was ever beloved by his "boys on the creeks" for he understood them; had lived their life, listened to their troubles, their hopes and their ambitions; and no trail was ever too long when human suffering required his skill. The welfare of the mothers and children was always his constant concern, and often in the far north emergency and critical operations were performed unflinchingly without adequate hospital facilities.

It was in this hinterland which he loved so well that the real urge came to Dr. Young to do all within his power to ease the load of human suffering. He entered Parliament in 1903 at the instance of the late Sir Richard McBride, for whom he had great personal admiration and respect, and, in 1907, he became Provincial Secretary and Minister of Education, retaining these portfolios until 1915. While a cabinet minister Dr. Young was responsible for, among other things, establishing the University of British Columbia, the Normal School System at Victoria, the reorganization of hospital facilities for the care of the mentally ill, the Provincial Archives, the Provincial Library, and the Provincial Museum. He was instrumental in the building of mental hospitals, and the institution of Essondale will be a lasting memorial in brick and stone to his memory.

On June 1st, 1916, Dr. Young became Provincial Health Officer and commenced the reorganization of public-health service in British Columbia, one of his first accomplishments being the annual medical examination of every school child. He was the leader in the establishment of the public-health nursing services and health units. He built slowly but carefully, adding a service here and a service there as funds permitted. During his regime the foundations were laid for the creation of the Divisions of the Provincial Board of Health: Laboratories, Tuberculosis Control, Venereal Disease Control, and Public Health Engineering. It was his vision that, in 1911, brought about the transfer of the registration of births, deaths, and marriages from the Attorney-General's Department to the Provincial Board of Health, where he guided its growth into the Division of Vital Statistics in 1939, for, as Provincial Health Officer, he was ex-officio Registrar of Births, Deaths, and Marriages. The administration and problems in this work seemed to be his hobby and relaxation.

Because of the calibre of the work Dr. Young had done in British Columbia and their desire to aid in its progress and extension, the International Health Division of the Rockefeller Foundation saw fit to grant the Provincial Board of Health over a period of a year a

sum in excess of \$100,000 to aid in establishing preventive medicine in this Province on a basis of full-time service and qualified personnel.

The basic public-health work done by Dr. Young in British Columbia was received with great commendation by health workers on the North American Continent, by whom he was considered to be one of the Deans of Public Health.

Among the personal honours conferred upon him by his colleagues, and most valued by Dr. Young, were the election to Honorary Life Fellowship in 1932 by the members of the American Public Health Association and the election to Honorary Life Membership by the members of the Canadian Public Health Association in 1938.

The positions to which he was elected in the leading professional organizations demonstrated the esteem in which he was held by his colleagues. In 1919-20 he was President of the Canadian Public Health Association; in 1936 he was President of the State and Provincial Health Authorities of North America; and in 1937 he was President of the Western Branch of the American Public Health Association. He was a member of the Advisory Council to the Federal Minister of Health, Vice-President of the Canadian Tuberculosis Association; Vice-President of the National Social Hygiene Association; Honorary Vice-President of the St. John Ambulance Association; a member of the National Committee for Mental Hygiene; a member of the American Child Hygiene Association; a member of the Advisory Council of Connaught Laboratories, University of Toronto; Fellow of the Royal Society of Tropical Medicine and Hygiene; Fellow of the Academy of Science of British Columbia; Vice-President and Governor of the Canadian Welfare Council and also Chairman of the Section on Maternal and Child Hygiene; Director of the Royal Alexandra Solarium for Crippled Children; and a member of the Council of the Canadian Medical Association.

Dr. Young had had a brilliant scholastic career and, in 1925, the University of British Columbia conferred upon him the honorary degree of Doctor of Laws. He had received similar honorary degrees from both Toronto University and McGill University.

Admired and respected by his colleagues, Dr. Young brought to his position a kindliness and rare wealth of understanding. Many will recall that remarkable gift of silence so often to be found in truly great men; that clear vision of the future; that courage and tenacity of the sturdy pioneer; and that unswerving loyalty and innate modesty so characteristic of this leader of men.

During the years Dr. Young gave himself entirely to the development of his plans for his beloved British Columbia, and in so doing forged for himself a lasting monument as a health authority of international repute, a scientist, a true patriot, and a friend of the people.

GENERAL.

NOTIFIABLE DISEASES.

A table on pages 11 to 15 shows the number of reported cases of notifiable diseases. During the year 1939 there was a continued reduction in the number of these diseases reported. For that calendar year there were only 11,429 cases reported. In 1938 there were 13,869 and in 1937, 30,920 cases reported.

The extensive programme of immunization against preventable diseases continues to show gratifying results. Only nine cases of diphtheria occurred last year in the Province as against seventeen cases during the year 1938. It is noteworthy that only one case of poliomyelitis was reported during the year. In connection with the increase in the reported number of smallpox cases—from two in 1938 to fourteen in 1939—it is significant that ten of these cases were reported from the William Head Quarantine Station. The cases were members of the crews of two freighters which arrived at quarantine with this particular infection on board. The other four cases occurred in the Peace River District, and epidemiological evidence indicates the possibility of the infection being introduced by a visitor from Alberta.

PUBLIC HEALTH NURSING.

The good work carried on by the local Public Health Nurses has continued with the same efficiency and is productive of gratifying results. There have been some changes and replace-

ments during the year, but it has always been possible to recommend qualified personnel to take these vacancies. Last year's report states that plans were under consideration for the development of a Public Health Nursing Service in the Quesnel District and in the South Kootenay District. It has not been possible to complete these plans this year, but it is expected that there will be a Public Health Nursing Service in the City of Cranbrook in January, 1940, and that a similar service will be initiated in Quesnel and District some weeks later.

In September, 1939, a Public Health Nursing Service was organized to serve the Vernon Rural District, with headquarters at Lumby. This indicates definite progress toward the extension of the Okanagan Valley Health Unit.

The annual Refresher Course held in April in Vancouver was in the form of a conference of full-time Health Officers and Public Health Nurses. The aim of the conference was to study problems in the development of community health programmes in British Columbia.

HEALTH LITERATURE.

The distribution of health literature from the Provincial Board of Health central office in Victoria continues to increase.

Through the co-operation of the Canadian Welfare Council, the Provincial Board of Health is able to provide much needed and appreciated advice to expectant mothers in the rural and remote sections of the Province in letter form. During 1939, the monthly series of prenatal letters was forwarded to 1,705 individuals. This means that over 8,500 prenatal letters were distributed.

The postnatal series of letters, one of which is forwarded each month following the birth of the baby, gives information concerning the health of the new-born infant during the first year of life. During the year 1939, this series of letters was distributed to 3,642 persons. This means that more than 41,700 letters were sent to mothers of new-born children.

The pre-school series of letters gives health information concerning that important period between 1 and 6 years of age. In all, 1,108 persons were sent pre-school letters. The school-child series was sent to 604 individuals.

PREVENTIVE DENTISTRY.

As in previous years, the Provincial Board of Health continues to give financial assistance in the matter of dental care for school and pre-school children in certain of the rural and more remote areas of the Province. Where there was no resident dentist, one was employed and sent in to perform the service, while in other areas arrangements were made with the resident dentist of the area. In this way, more than 5,000 school and pre-school children received the benefit of dental care, and certain instructions designed to assist in the prevention of dental caries.

SYLVATIC PLAGUE AND ROCKY MOUNTAIN SPOTTED FEVER SURVEY IN BRITISH COLUMBIA.

The spring of 1939 saw the beginning of the second summer's work of the Sylvatic Plague and Rocky Mountain Spotted Fever survey in British Columbia. This is a co-operative effort of the Provincial Board of Health and the Dominion Department of Pensions and National Health, assisted by a grant from the International Health Division of the Rockefeller Foundation. Valuable help was provided by the Entomological Branch of the Dominion Department of Agriculture at Kamloops.

The field-work was somewhat more widespread than during the previous year, and extended from Princeton in the west to Corbett in the east and from Golden in the north to the International Boundary in the south. Over 10,000 ticks were collected, and observations on distribution in seasonal limits of activity were recorded. No tularæmia was found this year, although some of the collection were from areas from which tularæmia had been demonstrated during the previous year's survey.

Wild rodents, principally Columbia ground-squirrels, were shot and trapped and together with their ecto-parasites were examined for evidence of plague infection. For the most part the work was carried on along the Southern Boundary of the Province, because this was considered the most suspicious area. More than 1,800 rodents and 3,300 fleas were collected.

Although no gross evidence of plague was found on dissection of the rodents, nevertheless these findings do not warrant a relaxation of vigilance, since failure to encounter infection during any one season or seasons does not preclude the presence of the plague bacillus.

Ground-squirrels had gone into hibernation in all areas by the end of August and attention was then turned to the collection and examination of rats in the seaports of Vancouver and New Westminster. No gross evidence of plague was found on dissection of these rats.

Through the co-operation of the Entomological Division of the Dominion Department of Agriculture, all fleas were determined as to species. The Theopis Index (Flea Index) of various lots has varied from 1 to as high as 3.4. As Theopis Index of 1 or over creates a potential danger situation, these figures are highly significant.

VACCINE AND SERUM.

The quantity of vaccines and serums which was distributed by the Provincial Board of Health during the year to physicians and Health Officers in connection with the health-work is indicated in the following table:—

	1934.	1935.	1936.	1937.	1938.	1939.
Smallpox vaccine (points).....	4,650	8,631	5,817	10,321	12,634	14,583
Diphtheria antitoxin (units).....	4,689,000	2,600,000	4,181,000	3,719,000	2,606,000	2,949,000
Diphtheria toxoid (doses).....	1,793	2,991	3,767	6,934	6,814	5,564
Schick test for diphtheria (pkgs.).....	64	58	89	70	98	87
Scarlet fever antitoxin (prophylactic) (pkgs.).....	841	357	880	378	444	248
Scarlet fever antitoxin (treatment) (pkgs.).....	281	151	324	230	272	278
Dick test for scarlet fever (pkgs.).....	60	51	248	179	302	303
Scarlet fever toxin for active immunization (doses)	386	863	2,637	2,087	4,251	2,789
Typhoid vaccine (doses).....	390	461	1,044	1,426	4,090	2,881
Tetanus antitoxin (units).....	437,000	1,398,500	774,000	691,500	920,000	2,190,500
Anti-meningococcus serum 20 c.c. (pkgs.).....	82	73	117	112	65	106
Pertussis (whooping-cough) vaccine (pkgs.).....	126	52	46	74	460	566

Thanks are extended to the Commissioner of the Provincial Police and his staff for the splendid assistance which was given to the Provincial Board of Health in the control of sanitary matters in many of the unorganized sections of the Province during the year.

We append an account of approvals for sanitary works during the year 1939:—

Cemetery-sites approved.—Vancouver (Mountain View, Abrey Park extension), Kamloops, Nakusp, Goldbridge, Falkland, Duncan (Lutheran), Willow Valley, Johnson's Landing (private), Kitwanga, Summerland (extension), and Darfield.

Sewage-disposal Systems approved.—Nelson (extension).

Water-supply Systems approved.—Hope, Port Alberni (pipe-replacement), Alberni (renewal), Saanich (extensions and renewals), Prince Rupert (extension), Trail (extensions), Revelstoke (renewal), Penticton (renewals), Surrey, Vernon (renewals and extensions), Armstrong (replacements), Annable-Warfield (extensions), Abbotsford, Wildwood, Nelson (extension), and West Vancouver (replacement).

TABLE SHOWING RETURN OF CASES OF NOTIFIABLE DISEASES FOR THE YEAR 1939.

	Cancer.	Cerebro. Sp. Meningitis.	Chicken-pox.	Conjunctivitis.	Diphtheria.	Dysentery (all forms).	Encephalitis.	Erysipelas.	German Measles.	Infectious Jaundice.	Influenza.	Malignant Edema.	Measles.	Meningitis (simple).	Mumps.	Ophthalmia Neonatorum.	Paratyphoid Fever.	Pneumonia (lobar).	Pneumonia (broncho).	Pneumonia (unspecified).	Polomyelitis.	Puerperal Septicemia.	Relapsing Fever.	Scarlet Fever.	Septic Sore Throat.	Smallpox.	Strep. Sore Throat.	Tetanus.	Tick Paralysis.	Trachoma.	Tuberculosis.	Typhoid Fever.	Undulant Fever.	Whooping-cough.	Total.		
Abbotsford and District	4		154	45				4			7		4					3	9					6	2					1	3			12	254		
Agassiz and District								1																										1	1		
Albani and District			33			3								1	1				7						1	26				1					1	74	
Alert Bay and District			2	8							215					2		5	7										3				4	246			
Alexis Creek and District			1															1	1						3									1	96		
Anyox and District			89	1			1											5	19						1						2			44			
Armstrong and District	2		8	5							2														1						1			1	44		
Ashcroft and District																																			1	1	
Atlin and District																																				1	
Baynes Lake and District																																				1	99
Bella Bella and District			12					1	1		24						1	9	4	2										1				43	99		
Bella Coola and District											10							2	1	1					3								53	69			
Blakeburn and District	1		1																															3	3		
Blubber Bay and District																																			3	3	
Blue River and District			16	2							2																								10	30	
Bralorne and District			32																																1	35	
Britannia Beach and District			4						1		41							1	1	3															8	59	
Burnaby and District			1																																1	1	
Burns Lake and District	1		4						1		1		2					1																	13	13	
Campbell River and District	1		8			1		1			46		1					3	4												1				19	90	
Canal Flats and District																																					
Castlegar and District			20										1		1																					25	
Ceepeecee and District											5																									12	
Chase and District				1				1			29															3					1					40	
Chemainus and District	3		35										31						2																75		
Chilliwack and District			15	33	1			2					3					2	5	1															74		
Cloverdale and District																																					
Coal Creek and District			19								28																									67	
Cobble Hill and District			14										39																						55		
Coquitlam and District													4		10																				16		
<i>Carried forward</i>	12		469	95	1	4	1	10	3		410		106	1	12	2	1	33	61	7		1		81	37				5	9	4			168	1,484		

Kelowna and District		118	1																				43	169						
Keremeos and District																														
Kimberley and District	2	7		1	5																				22					
Kincolith and District						19																			19					
Ladner and District	3	4	1		1																				42					
Ladysmith and District		2				12																			46					
Lake Cowichan and District																														
Langford and District																														
Langley Prairie and District	3	44		1																					110					
Lillooet and District	1	37		2		57																			108					
Lytton and District	1	22		13		89																			197					
McBride and District		15																							34					
Masset and District																									2					
Mayne Island and District						12																			16					
Merritt and District																									11					
Michel and District	1	18			2	100																			122					
Minto City and District																														
Mission City and District		19		1		1																			79					
Nakusp and District	2		2			1																			16					
Nanaimo and District	3	182			1																				198					
Nelson and District	3	1	27		3	19																			109					
New Denver and District			1																						1					
New Westminster and District	16	1	12		1	4	1																		204					
North Vancouver and District	3																								3					
Oak Bay																									28					
Ocean Falls and District	1	32		2																					52					
Oliver and District	1	8	33			6																			58					
Parksville and District																														
Peace River District		19			5																				80					
Peachland and District																									3					
Pender Harbour and District																														
Pender Island	1					8																			11					
Penticton and District	6		2		8	5																			32					
Pioneer Mines and District																									6					
Port Alberni and District	2	1			2	49																			78					
Port Alice and District		2				20																			22					
Port Coquitlam and District	2	3			1																				26					
Port Haney and District		28																							78					
Port Moody and District																														
Port Renfrew and District		3		4																					26					
Port Simpson and District	1	1				3																			16					
Powell River and District	3	75																							127					
<i>Carried forward</i>	97	2 1408	139	3	37	2	38	32	4	1155	499	2	75	4	3	142	145	22	3	209	164	4	10	3	32	41	15	4	662	4,956

Tofino and District																							5	46												
Trail and District	2	51									12	2					1						9	109												
Tulsequah and District		1																						35												
Ucluelet and District									1															9												
Greater Vancouver	743	1188							5							169								3,474												
Vanderhoof and District											46	1												34												
Vernon and District	2	13									2	3												71												
Victoria and District	140	229									21	15												524												
Wells and District	1	1									2													23												
West Summerland and District	1	24																						48												
West Vancouver and District																								31												
White Rock and District											8													11												
William Head																								14												
Williams Lake and District	1	21									2	3												54												
Woodfibre and District																								1												
Zeballos and District	2	13																						23												
Totals	995	5 3213	147	9	71	3	87	83	4	1460	625	3 271	4	8	182	183	27	1	4	1 595	241	18	10	1	4	36	198	29	12	1888	10,418					
																																			1,011	
																																			11,429	
																																				*1209

NOTE.—Tuberculosis, *1,209: This total is made up from reports received from private physicians during January to April. After April, returns from the Division of Vital Statistics for other months of the year, as follows: May, 112; June, 141; July, 113; August, 116; September, 159; October, 133; November, 133; December, 104; total, 1,011. January to April, 198; April to December, 1,011; total cases, 1,209.

DIVISION OF LABORATORIES, PROVINCIAL BOARD OF HEALTH,
ANNUAL REPORT FOR THE YEAR 1939.

C. E. DOLMAN, M.D., DIRECTOR OF DIVISION.

NUMBERS AND TYPES OF TESTS PERFORMED.

At the Vancouver laboratories during 1939, 118,306 tests of all kinds were performed, compared with 113,774 tests in the preceding year, an increase of 4 per cent. The combined total of examinations conducted by the branch laboratories was 28,623, as compared with 27,480 for 1938, or again an increase of 4 per cent. Altogether, 146,929 tests relating to the diagnosis and control of communicable disease were performed by the Division of Laboratories during the year.

The numbers of various types of tests performed in the main Vancouver laboratories are set forth in Table I., while Table II. gives similar information regarding the work of the branch laboratories.

TESTS RELATING TO VENEREAL DISEASE CONTROL.

A glance at the tables reveals that, as in previous years, tests relating to syphilis and gonorrhœa comprised a very high proportion of our total turnover. In the Vancouver laboratory no less than 84,142 tests, or 71 per cent. of the total, related to venereal disease control; while 19,160 tests of like nature, or 67 per cent. of their combined totals, were performed by the branch laboratories. Throughout the Province, the Division of Laboratories therefore performed 103,302 tests connected with venereal disease. This figure is approximately double the total number of tests of all kinds performed in the Vancouver laboratories during 1935, only four years ago, a point which emphasizes the immense effect upon the work of this Division occasioned by the recently awakened interest in venereal disease control.

Although a small decrease is shown in the number of smears examined for gonococcus in the main laboratories during the year, no conclusions can be drawn from this regarding the trend of incidence of gonorrhœa, for the branch laboratories showed an equivalent increase in examinations of this kind. The widespread use of sulphanilamide and its derivatives in the treatment of gonorrhœa, and the frequent masking effect of such drugs upon the signs and symptoms of the disease, may well lead to a lesser number of smears being taken without any corresponding diminution in the incidence of infectivity. This fact enhances the importance of the cultural method of detection of residual gonococcal infection (a field in which this Division has done pioneer work), for patients under treatment with sulphanilamide are very prone to show negative smears and positive cultures. It is gratifying to record that the branch laboratory at Victoria has made gonococcus culturing available to the local clinic of the Division of Venereal Disease Control. We deeply regret that our overcrowded situation in Vancouver forces us to continue withholding this important facility from private physicians, who still send in far more smears for examination than does the Division of Venereal Disease Control.

Sero-diagnostic tests for syphilis continue to increase steadily. The "standard" Kahn test is now our routine procedure throughout the Division, and was performed on over 52,000 blood specimens during the year. In Vancouver, the Hinton and Kline tests were also done on all positive or doubtful Kahn specimens, and on specimens accompanied by requisition forms indicating the presence of signs or symptoms of syphilis in the patient; while the Victoria laboratory, during the year, began doing Hinton tests on similar types of specimens. After February 1st, 1939, no further "presumptive" Kahn tests were performed in the Vancouver laboratory. All branch laboratories were supplied with antigens manufactured and standardized in the main laboratory.

Early in the year, a group of six carefully chosen sera was sent out to each branch laboratory, as a check upon the accuracy of their techniques in performing the Kahn test and the suitability of their methods of reporting results. On the whole, the results of the survey were very satisfactory. The majority of the branch laboratories obtained results identical with those obtained in Vancouver. In one or two instances slight errors were made and steps were taken to safeguard against a repetition of these. An additional set of the serum

specimens was sent to Dr. Kahn at Ann Arbor, Michigan, who very kindly checked on the reactions. His reports on the specimens were in every respect identical with our own, a fact which confirms, in very gratifying fashion, the high standard of accuracy maintained in the Division. Further checks of this kind will be made from time to time.

OTHER TYPES OF TESTS.

The number of animal-inoculation tests, while still relatively small, rose from 150 in 1938 to 179 in 1939. The inadequacy of the space available for the care of laboratory animals, and the lack of a special room for carrying out autopsies on previously inoculated animals, make the continued increase in requests involving animal inoculations a matter of special concern. We are unable even to observe the elementary precaution of segregating guinea-pigs inoculated with tuberculous material from our healthy stock, since one very small outside room represents the sole space available for both healthy and infected animals.

During 1939, somewhat smaller numbers of specimens reached us for blood-agglutination tests, owing to a slight reduction in the incidence of cases of typhoid and paratyphoid fevers. However, the routine use throughout the year of "H" and "O" antigens in performing all Widal tests for typhoid agglutinations is reflected in the increased totals shown under these headings.

The reduced incidence of the enteric group of fevers during the year is likewise responsible for a considerable reduction in the numbers of stool cultures made for micro-organisms of the typhoid group. Since such examinations take up a disproportionately large amount of time, it became possible to give special attention to the problem of adapting Craigie's technique of phagotyping for *B. typhosus* to public-health laboratory practice. The Provincial Laboratory at Vancouver thus became not only the first State or Provincial laboratory to use the phage-typing method as a routine procedure for the more rapid identification of *B. typhosus*, and as a means of obtaining epidemiological clues in a given outbreak of typhoid fever, but also enjoyed the distinction of presenting the first report on the usefulness and limitations of this method in the public-health laboratory.

Cultures for *H. pertussis* (the "cough-plate" method of diagnosis of whooping-cough) more than doubled in numbers, from 127 to 277. We have been persistent advocates of this means of diagnosis. Since it permits cases of whooping-cough to be identified at an early stage, often before any whoop has developed, the cough-plate method provides a means of securing prompt segregation of early, or of atypical, cases. As the use of pertussis vaccine increases, mild and atypical cases of whooping-cough may become more frequent, and the importance of specific diagnosis by the cough-plate method will be enhanced. Unhappily, the preparation of cough plates is an especially troublesome matter for the laboratories under present circumstances. The requisite medium contains a high percentage of sheep blood, and we have no means of maintaining a sheep at Hornby Street. Since the abattoir cannot undertake to supply us with sterile blood on demand, a sheep is maintained on behalf of the laboratories at the University. This animal, purchased from funds appropriated to the Division by the Legislature, grazes on the property of the Alma Mater Society of the University, is tended by employees of the Department of Bacteriology and Preventive Medicine at the University, is bled by employees of the Western Division of Connaught Laboratories, while the blood is transported to the laboratories at Hornby Street by the Director. This arrangement is admittedly an excellent example of the type of co-operation with certain of the foregoing organizations which has become mutually indispensable; but it serves equally well to illustrate the clumsy methods we are often obliged to adopt, in order to circumvent the exigencies of our miserably inadequate accommodation.

EFFECT OF WAR UPON WORK OF DIVISION OF LABORATORIES.

Immediately following Great Britain's declaration of war upon Germany, steps were taken to place in security all bacterial cultures which might be sought by saboteurs. Instructions were issued to all branch laboratories to take appropriate measures to this end, and it was arranged to have a watchman on duty all night and at week-ends in the Vancouver laboratories. A system of daily examinations of water samples taken from all the intakes supplying the Greater Vancouver area was also instituted. The desirability of considering the possibility of deliberate contamination of milk-supplies as a final argument for introducing compulsory pasteurization of all milk and milk products in the Greater Vancouver area was

also urged upon the local authorities, but to no avail. It appears that not only the citizens of the Province, but also the armed forces stationed here, must continue to be denied the privilege which the citizens of Ontario now enjoy of living in communities in which no raw milk may be distributed. The full co-operation of the staff of the Division in making every possible contribution to the maintenance of public health in war-time was pledged to the Provincial Health Officer and to the Honourable the Provincial Secretary. In particular, apart from the above-mentioned precautions, which were automatically taken, it was urged that fullest possible use of the Kahn-testing facilities of the laboratories should be made by the authorities in charge of the armed forces stationed in British Columbia. In order that no recruit should be enrolled in the Army, Navy, or Air Force with an unsuspected positive Kahn test, the staff expressed a readiness to perform a routine Kahn test upon every prospective recruit, if necessary by giving their spare time to this project. That fuller advantage was not taken of this offer is indeed regrettable. However, all members of at least one battalion were Kahn tested during the first few months of the war. Numerous water samples were also received for bacteriological analysis from newly established military camps towards the end of the year. It is to be expected that as the war proceeds, far greater demands of the above kinds will be made upon the laboratories; while eventually, as the health of the general public begins to deteriorate as an inevitable consequence of prolonged warfare, new burdens of unpredictable magnitude, and which we are at present entirely unfitted to cope with, must fall upon us.

BRANCH LABORATORIES.

During the year, the branch laboratories at Victoria, Nanaimo, Kamloops, Kelowna, Trail, and Nelson continued to carry out their obligations to the Provincial Board of Health in an efficient and unassuming fashion. The public-health laboratory-work at Victoria, Kamloops, and Nelson is under the direction of medically qualified pathologists, whose major responsibility is to the well-equipped local hospitals. In Kelowna the work is done under the direction of the full-time Director of the Kelowna Health Unit. In Nanaimo and Trail, a certified medical technologist carries out the local public-health laboratory-work. To each of the above centres a small annual subsidy is paid, from which little, if any, profit can be made. In fact, most of the branch laboratories claim their subsidies do not cover the cost of carrying out the public-health laboratory-work, which tends on the whole to increase annually with them as it does in Vancouver. It is difficult to apply a fair cost-accounting system, where both public health and clinical pathological work is done in the same laboratory and by the same staff; but as circumstances permit, and when gross inequities become apparent, adjustments are made from time to time in the rate of subsidy. All branch laboratories are now supplied with printed requisition and report forms, and with standardized antigens, from the main laboratories; and they are also being urged to divert to Vancouver the more complicated types of examination, such as stool cultures. Reference has already been made to the checks being made upon the accuracy of their work in connection with the sero-diagnostic tests for syphilis. The increasingly frequent discussion of technical difficulties with the main laboratory, and the monthly report they are required to send to the Director of the Division, enables us to feel satisfied that the branch laboratories are performing an important service in their respective communities and, therefore, to the work of the Provincial Board of Health. If the main laboratories were housed in more suitable quarters, absorption of the work of one or more of the branch laboratories might prove feasible and desirable. But under present circumstances, any such attempt would only add to our problems.

Early in the year the Director visited Prince Rupert, at the request of the Provincial Health Officer, to report on the question whether a new branch laboratory should be organized there. After carefully going into the matter with all the local members of the medical profession, it seemed evident that the distance of Prince Rupert from Vancouver, its position as a centre for many districts, and the high local index of transiency and indigency, with correspondingly high incidences of tuberculosis and venereal disease, fully warranted a recommendation that a new branch laboratory should be started at Prince Rupert on a provisional, small-scale basis, with Dr. R. E. Coleman, a fully-qualified pathologist, in charge. Space was provided in the new Prince Rupert Hospital, and with the beginning of the new fiscal year on April 1st the new branch laboratory came into operation.

SCIENTIFIC MEETINGS ADDRESSED AND REPORTS PUBLISHED.

During the year, the Director addressed various lay organizations on topics connected with the work of the Division. He attended the Sixth Pacific Science Congress held at Berkeley, California, during July, where he presented a paper, was Chairman of the Symposium on Food Poisoning in the Epidemiology and Nutrition Section of the Congress, and was a member of the Editorial Board for the Proceedings of the Congress. Miss Kerr, Assistant Director, and Miss Allan, Serologist, also attended several sessions of the Congress, as well as the meetings of the Laboratory Section of the Western Branch, American Public Health Association, held in Oakland just prior to the Congress. The following papers were presented or published by members of the staff during the year:—

- (1.) "The Interpretation and Evaluation of Public Health Laboratory Tests," C. E. Dolman, Vancouver Medical Association Bulletin, July, 1939, 15, 292. (Originally presented to Victoria Medical Society.)
- (2.) "Samuel Bennett, Seth Alden, and the Lag," C. E. Dolman, Canadian Nurse, 1939, 35, 625. (Originally presented to Conference of Public Health Officials, Vancouver.)
- (3.) "Staphylococcus Enterotoxin," C. E. Dolman. To be published. (Presented to Sixth Pacific Science Congress, Berkeley, California.)
- (4.) "The Kitten Test for Staphylococcus Enterotoxin," C. E. Dolman and R. J. Wilson. To be published. (Presented to Christmas Meeting, Laboratory Section, Canadian Public Health Association, Toronto.)
- (5.) "Two Phage-Susceptible Types of *B. typhosus* isolated from a Single Case of Typhoid Fever," D. E. Helmer, D. E. Kerr, C. E. Dolman, and L. E. Ranta. To be published. (Presented to Christmas Meeting, Laboratory Section, Canadian Public Health Association.)

GENERAL OBSERVATIONS.

During the year, the Division lost the valued services of Dr. G. A. Ootmar, Director of the Kelowna Health Unit, and of the branch laboratory at Kelowna, who died after bearing a long illness with the greatest fortitude. We also shared with the other Divisions of the Provincial Board of Health a grievous loss in the death of our Provincial Health Officer, Dr. H. E. Young. The main laboratories in Vancouver, and also the branch laboratories, were brought into being by Dr. Young's own initiative and foresight in the face of many obstacles, at a time when the Divisions of T.B. and V.D. Control, whose expansion in recent years has contributed so much to the increased work of this Division, did not yet exist. Our tribute to his memory and accomplishments has been paid elsewhere.

Relations with the medical profession and with other Divisions of the Provincial Board of Health remain on a friendly and co-operative footing. Practising physicians are becoming increasingly aware of the vital importance of our service to themselves and to their patients, and occasionally openly express their appreciation. We are grateful to them and to our colleagues in the Provincial Board of Health, and in the Metropolitan Health Services of Greater Vancouver, who display an increasing understanding of the value of our work and of the serious difficulties under which we operate.

Reference has been made in previous reports to the proposed Institute of Preventive Medicine, and it is not deemed seemly to bewail in this report the fact that world events entirely beyond our control should be the sole cause of a probable postponement of its construction. It should be emphasized, however, that these same world events will inevitably lead to an even greater volume of work for us to do, so that the need for the new building will soon become more acute than ever. Fortunately, excellent plans have been drawn up to the last detail, the site has been selected on the campus of our University, while the whole scheme has been officially endorsed not only by the Legislature, but by the British Columbia and the Vancouver Medical Associations, the Greater Vancouver Health League, and the Board of Governors of the University of British Columbia. Our faith is that the merits of the Institute of Preventive Medicine proposals are such as to lead to the early implementing of the Government's expressed intention to proceed with its construction. No other satisfactory solution to the difficulties facing this Division is apparent. No alternative proposal promises so convincingly to mobilize to the fullest advantage the possibilities for further fruitful

co-operation in the field of preventive medicine which should result from placing under the same roof these organizations which for the past five years have worked together under unified direction.

I close by recording my deep appreciation of the efficiency and loyalty of all members of the staff, whose friendliness makes it possible for both them and me to meet more cheerfully our present difficulties of space and time.

All of which is respectfully submitted.

C. E. DOLMAN.

TABLE I.—STATISTICAL REPORT ON EXAMINATIONS DONE DURING THE YEAR 1939.

Examination.	Out-of-town Specimens.	City.	Total in 1939.	Total in 1938.
Animal inoculation.....	31	148	179	150
Blood agglutinations—				
* <i>B. typhosus</i>				745
Flagellar "H" antigen.....	246	1,288	1,534	941
Somatic "O" antigen.....	246	1,288	1,534	941
<i>B. paratyphosus</i> (A).....	246	1,286	1,532	1,670
<i>B. paratyphosus</i> (B).....	246	1,287	1,533	1,675
<i>B. dysenteriae</i> (Shigæ).....	7	103	110	157
<i>B. dysenteriae</i> (Flexner).....	7	104	111	157
<i>B. dysenteriae</i> (Sonne).....	7	105	112	156
<i>Br. abortus</i>	250	1,308	1,558	1,703
<i>B. tularensis</i>	1	2	3	5
Cultures—				
Miscellaneous.....	14	48	62	29
<i>B. tuberculosis</i>	42	143	185	150
Typhoid group.....	132	344	476	968
<i>H. pertussis</i> plates.....	36	241	277	127
<i>C. diphtheriae</i>	96	6,834	6,930	7,893
Hæmolytic staphylococcus.....	109	1,637	1,746	2,092
Hæmolytic streptococcus.....	109	1,637	1,746	2,092
Gonococcus.....		3,537	3,537	3,742
Direct microscopic examination for—				
Gonococcus.....	1,095	14,321	15,416	16,495
<i>M. tuberculosis</i> (sputum).....	1,437	4,590	6,027	5,754
<i>M. tuberculosis</i> (spinal fluid).....	18	7	25	9
<i>M. tuberculosis</i> (urine).....	23	98	121	151
<i>M. tuberculosis</i> (pleural fluid).....	8	24	32	33
<i>M. tuberculosis</i> (miscellaneous).....	13	47	60	64
<i>Treponema pallidum</i> (dark-field).....	28	93	121	118
<i>Treponema pallidum</i> (nigrosine).....	6	20	26	67
Vincent's spirillum.....	43	319	362	447
<i>C. diphtheriae</i>		1	1	2
Trichophyton (ringworm).....		69	69	59
Helminths (parasites).....	10	74	84	68
Kahn tests—				
Blood.....	5,717	35,020	40,737	36,699
Spinal fluid.....	259	1,792	2,051	2,000
Spinal fluid—				
Routine.....	236	1,036	1,272	1,300
Colloidal reaction.....	259	1,792	2,051	2,000
Milk—				
Bacterial counts.....	12	1,630	1,642	1,753
Coli-aerogenes.....	12	1,630	1,642	1,753
Water—				
Total bacterial counts.....		568	568	711
Coli-aerogenes.....	770	568	1,338	1,517
Differential counts.....		568	568	705
†Special examinations.....	282	272	554	
Convalescent serum distributed—				
Measles.....	5	5	10	8
Poliomyelitis.....		2	2	25
Miscellaneous tests—				
Variola complement-fixation.....	3	1	4	8
Hinton.....	3,153	12,454	15,607	9,270
‡Kline.....	777	3,607	4,384	
§Presumptive Kahn.....	34	178	212	7,487
Opsono-phagocytic.....	4	17	21	19
Other, miscellaneous.....	39	95	134	124
Totals.....	16,068	102,238	118,306	113,774

* Included in Flagellar "H" and Somatic "O" antigens subsequent to June, 1938.

† Test not performed prior to September, 1939.

‡ Test not performed prior to January, 1939.

§ Test not performed subsequent to January 31st, 1939.

TABLE II.—NUMBER OF TESTS PERFORMED BY BRANCH LABORATORIES IN 1939.

Type of Test.	Kamloops.	Kelowna.	Nanaimo.	Nelson.	Prince Rupert (since April 1st only).	Trail.	Victoria.	Totals, 1939.	Totals, 1938.
Animal inoculation	---	---	4	---	---	---	---	4	---
Agglutination tests for typhoid	55	54	274	50	10	530	128	1,101	1,212
Bacteriological tests on milk samples	60	132	65	196	3	---	---	456	320
Bacteriological tests on water samples	136	149	99	16	---	50	---	450	322
Cultures—									
Gonococcus	---	---	---	---	---	---	604	604	---
Typhoid group	---	33	---	12	---	---	40	85	174
<i>Br. abortus</i>	---	73	---	11	---	---	---	84	60
Diphtheria	52	4	29	126	1	3	687	902	991
Miscellaneous	---	7	20	---	---	41	---	68	95
Direct microscopic examinations for—									
G.C. smears	624	97	1,581	606	137	585	2,614	6,244	5,166
<i>M. tuberculosis bacillus</i> (sputum)	624	113	868	245	162	47	4,069	6,128	6,656
<i>Treponema pallidum</i>	---	---	---	---	3	5	---	8	29
Vincent's angina	47	---	---	10	1	---	---	58	65
Kahn, Wasserman, and other serological tests for syphilis	1,987	972	1,358	846	125	2,175	4,654	12,117	11,764
Spinal fluid—									
Kahn	---	---	28	17	17	59	---	121	165
Routine tests	56	---	47	---	---	---	---	103	112
Mastic	---	---	26	---	---	---	---	26	52
Colloidal	---	2	---	---	---	38	---	40	82
Miscellaneous	---	---	---	16	5	3	---	24	215
Totals, 1939	3,641	1,636	4,399	2,151	464	3,536	12,796	28,623	---
Totals, 1938	3,245	1,538	5,008	2,236	---	3,652	11,801	---	27,480

RETIREMENT OF MR. H. B. FRENCH AS DEPUTY REGISTRAR, BIRTHS, DEATHS, AND MARRIAGES.

Mr. Herbert Benstead French retired on April 1st, 1939, from the Provincial Civil Service as Deputy Registrar of Births, Deaths, and Marriages for British Columbia, a position which he had filled most worthily for some nineteen years.

Mr. French, the son of a Yorkshire clergyman, was educated at St. Peter's school, Yorkshire, and at Highgate School, London, England, and later was graduated with the degree of M.A. from Queen's College, Cambridge. In 1910 he came to Canada and first settled at Strathmore, Alberta, and in 1912 moved to British Columbia. He entered the Provincial Civil Service on June 13th, 1912, in the Department of Education, and was transferred to the Archives Department of the Provincial Library on October 4th, 1912, remaining there until the end of May, 1914, at which time he was appointed a Clerk in the Provincial Board of Health. On June 1st, 1919, Mr. French was transferred to the Civil Service Commission as Clerk and upon the retirement of Mr. Munroe Miller on May 1st, 1920, he was appointed Deputy Registrar of Births, Deaths, and Marriages.

During his regime the office of the Registrar of Births, Deaths, and Marriages developed from a small registry office with a staff of four into a well-balanced Division of Vital Statistics responsible for all record systems within the Provincial Board of Health, and for the collection and analysis of statistical data.

In the field of classification of causes of death, Mr. French had no peer. One of his most noteworthy achievements was the organization and unification of statistical publication areas in 1930.

APPOINTMENT OF MR. J. T. MARSHALL AS DIRECTOR, DIVISION OF VITAL STATISTICS.

A significant appointment during the year 1939 was that of Mr. John Thornton Marshall to the position of Director of the Division of Vital Statistics.

Twenty-four years ago Mr. Marshall entered the Civil Service of British Columbia and for the last twenty-three years he has served in the Vital Statistics branch of the Provincial Board of Health. Through his ability and diligence he was promoted from time to time until, on April 1st, 1929, he was appointed as Inspector of Vital Statistics.

During his years of service to the Province of British Columbia he has set up record systems for the various divisions of the Provincial Board of Health, as well as acted as an Adviser on Records and Statistics to the Child Welfare Division and Welfare Field Service. In 1936 Mr. Marshall was sent to Vancouver to develop a record system for the Division of Tuberculosis Control and to devise methods for statistical analysis. Acknowledgement of the value and success of his work in this field came from many sources and as a natural consequence he was asked in 1937 to reorganize the record system of the new Division of Venereal Disease Control. In the same year, in collaboration with Dr. G. F. Amyot, he assisted in the preparation of a manual of the Public Health Nursing Record System. In 1936 he supervised the statistical analysis of a Province-wide hospital survey, and subsequently advised the Inspector of Hospitals on the organization of a Hospital Record System.

In the field of vital statistics itself Mr. Marshall has made many contributions. In 1932 he wrote "Vital Statistics in British Columbia," a volume which commanded wide praise and which has been of considerable value to persons interested in Canadian vital statistics. He has written numerous articles in the Bulletin of the Provincial Board of Health on timely vital statistics topics, and in 1938 he wrote for the Canadian Public Health Association a comprehensive article on the "Development of Public Health in British Columbia."

Based on his long experience in vital statistics and appreciation of the needs of the public, Mr. Marshall has influenced important public-health legislation in the Province of British Columbia. He drafted the "Marriage Act" of 1930, the "Vital Statistics Act" of 1933, and the "Adoption Act" of 1935. In 1938 a parliamentary technical committee on the "'Marriage Act' of British Columbia" was appointed and, in his capacity as Secretary, Mr. Marshall wrote the report of the committee and drafted legislation to implement its recommendations.

In order to make the Division of Vital Statistics more useful to the general public, Mr. Marshall created separate registries for the recording of registrations of adoptions and divorces as well as setting up a Marine Registry for births, deaths, and marriages. He further increased the efficiency of the Division of Vital Statistics in 1937 by introducing the punch-card method of indexing births, deaths, and marriages. Subsequently, indexes for adoptions, burials, baptisms, divorces, ministers and clergymen were all set up under the Hollerith system of punch-card tabulation.

As Inspector of Vital Statistics Mr. Marshall spent much time in creating workable Vital Statistics Registration Districts. He created maps of the Registration Districts, showing the geographical location of cities, towns, post-offices, Indian Reserves, etc., and was author of the "Statistical Gazetteer of British Columbia" which is in daily use by statistical agencies throughout the Province. This experience stood him in good stead when he assisted in the creation of Statistical Publication Areas in British Columbia, used by both the Dominion Bureau of Statistics and the Provincial Government.

Mr. Marshall was far-seeing in his view of the functions of vital statistics in the public-health programme. He saw that complete registration of births, deaths, and marriages was only the beginning of the responsibilities of a Vital Statistics Bureau. He believed that fundamentally the Division of Vital Statistics should be the "work-shop" for the Provincial Board of Health, designed to collect, compile, and analyse statistical information on which first to evaluate the public-health programme, then to analyse its progress and efficiency. With this in view, he was responsible for the introduction of machine tabulation in accounting and statistical analysis by creating the first Provincial Statistical Service which was later taken over by the Provincial Bureau of Economics and Statistics.

Thus it is that he has been able to co-ordinate the record systems of the various Divisions of the Board of Health. He has created numerous codes for statistical analyses, together with forms and punch-cards for the various health and welfare branches operating under the jurisdiction of the Department of the Provincial Secretary, and has reorganized completely the filing and index systems of the various Divisions of the Board of Health.

Mr. Marshall was first elected a member of the American Public Health Association in 1935 and in 1939 he was accorded the honour of being elected a Fellow of the same organization. In the same year he served on the Public Relations Committee of the Western Branch. He is also a member of the Canadian Public Health Association and serving on the special sub-committee on the Confidential Death Certificates. He is a member of both the American Association for the Advancement of Science and the American Statistical Association.

Since the inception of the American Association of Registration Executives, Mr. Marshall has taken an active interest in this body. In 1937 he served as Canadian Representative on the Committee on the Promotion of Registration and as British Columbia representative on the Committee on the Official Use of Vital Statistics Records, and in 1938-39 as a member of the Committee on Standard Bureau Methods. In 1938 he was elected Vice-President of the Association and in 1939 was re-elected.

EXTRACT FROM ANNUAL REPORT OF THE DIVISION OF VITAL STATISTICS, 1939.

JOHN T. MARSHALL, DIRECTOR OF DIVISION OF VITAL STATISTICS.

POPULATION.

The population of the Province for the census year 1931 was 694,263. Estimates by the Dominion Bureau of Statistics for the following years are: 1935, 735,000; 1936, 750,000; 1937, 751,000; 1938, 761,000; and 1939, 774,000.

REGISTRATIONS.

The total registrations filed in the Division of Vital Statistics for the year 1939 numbered 29,730, an increase of 1,265 over 1938 and an increase of 6,101 over 1935.

The following table summarizes the total number of registrations of live births, deaths, marriages, still-births, adoptions, and divorces for the five-year period 1935 to 1939, inclusive:—

Year.	Live Births.	Deaths.	Marriages.	Still-births.	Adoptions.	Divorces.	Total.
1935.....	10,987	6,927	5,020	232	183	280*	23,629
1936.....	11,186	7,254	5,465	236	80	462	24,683
1937.....	13,033	7,981	6,232	254	109	533	28,142
1938.....	13,812	7,455	6,158	259	134	647	28,465
1939.....	13,176	7,626	7,897	279	150	602	29,730

* Act in force May 1st, 1935.

GENERAL OFFICE ROUTINE.

The year 1939 saw a terrific load placed on every Division of Vital Statistics throughout Canada. This was brought about mainly through the outbreak of hostilities in Europe and the need for Canada to apply regulations and measures for defence purposes. The United States also began a systematic check on the standing of all its citizens, with the result that a great demand for birth and marriage certificates has come from south of the International border. However, even with the added load, we have been able to consolidate our position with regard to some of the improvements and the extension of services which we have made during the past few years and we have, within limited means, been able to introduce a number of further improvements in the administration of the Division of Vital Statistics.

ORGANIZATION OF THE DIVISION OF VITAL STATISTICS.

The organization of the Division of Vital Statistics as outlined in the previous report became an established fact on April 1st, 1939, and during the last nine months of the year the agreement regarding Vital and Public Health Statistics which was reached between the Department of the Provincial Secretary and the Department of Trade and Industry has operated to the mutual satisfaction of both these Departments of Government and other agencies which have been affected by the agreement. Problems of a minor nature have arisen which have been ironed out satisfactorily and a good deal of consolidation in administration and statistical practices has been brought about.

LEGISLATION.

“VITAL STATISTICS ACT.”

There were no amendments to the “Vital Statistics Act” recommended for the 1939 Session of the Legislature.

The amendments made in 1938 as outlined in the last report have been given effect and have proven very effective in strengthening the scope of the “Vital Statistics Act.”

“MARRIAGE ACT.”

There were no amendments to the “Marriage Act” recommended for the 1939 Session of the Legislature.

It is a matter of deep regret that force of circumstance has precluded the Lieutenant-Governor in Council bringing into operation by proclamation sections 39 to 42, inclusive, which provide for a pre-marital blood test and we have been unable, therefore, to extend our co-operation in this respect with the Division of Venereal Disease Control.

OUR CONTRIBUTION TO CANADA'S WAR EFFORT.

With the outbreak of hostilities between Britain and Germany at the beginning of September, 1939, a terrific load was placed on the Division of Vital Statistics. By 10 o'clock on the morning of September 5th there came the first indications that there was an abnormal condition. Every Marriage Commissioner's office in the southern part of the Province was deluged with applications for marriage licences and the solemnization of marriage by Civil Contract. The offices were literally jammed.

Men already in the militia were being called to the colours and many persons who had been contemplating marriage in the near future decided that they had better get married immediately rather than wait in case their regiment were transferred or they were moved to the theatre of war.

The "Marriage Act" contains an eight-day residence requirement and a three-day waiting period between the application for the licence and its issuance for the solemnization of the marriage.

Many hundreds of people demanded the issuance of licences for immediate marriage, using all kinds of arguments and pretexts as a means of securing a licence forthwith. The regulations, however, were not relaxed, except in cases where recommendations for immediate marriages were made by the officer commanding the various regiments. This was by agreement with the Officer Commanding, Military District No. 11, where it was required that a soldier be transferred without delay.

The Division anticipated that it would be called upon by the Federal Government to either issue certificates or at least check the applications of enlisted men for some of the services and, where such enlisted men had dependents, to check the statements made regarding births, deaths, marriages, adoptions, and divorces in the applications for dependents' allowances.

Realizing from our experience of the war of 1914-18 that this would tax the energies of every member of the Division, our technical staff in the statistical section was immediately trained in registration and certificate issuance technique in order that in emergency cases they could be pulled from statistical work to meet sudden demands.

During the last war the documentation required by the military authorities and subsequent Pension Boards was completed after the cessation of hostilities and, in many instances, after the return of the soldiers to Canada. In a subsequent check-up it was found that many unlawful claims for dependents' allowances and pensions had been paid.

One of the first efforts of the Department of National Defence and the Treasury Board of the Federal Government was to endeavour to remedy the situation and, on September 11th, we received a letter from the Comptroller of the Treasury enlisting the assistance of the Division with regard to the determination of the genuineness of the applications for dependents' allowances. Their concern was to be satisfied that the particulars of marriage and birth shown in the applications were correct. It was agreed that the Division should ask for powers to co-operate with the Comptroller of the Treasury and, accordingly, on September 13th, 1939, the Lieutenant-Governor in Council approved an Order in Council, which provided that:—

"Under the provisions of section 39 of the 'Vital Statistics Act,' chapter 302 of the 'Revised Statutes of British Columbia, 1936,' that all searches of the original registrations filed in the Division of Vital Statistics pursuant to the provisions of the said Act, made by duly designated representatives of the Dominion Treasury Department with reference to the officers and men mobilized for duty with the Canadian Active Service Force and their dependents be made without charge."

The Comptroller then designated the Treasury Officer of Military District No. 11, Victoria, B.C., as the official to whom the form would be mailed from Ottawa, giving the marriage and birth particulars of each application, and arrangements were made for checking the applications without calling upon the Division to issue certificates. This machinery was completed in less than seventy-two hours.

In the war of 1914-18 the Province was required to issue abbreviated certificates to each individual enlisted in active service and his dependents. This privilege, extended by the Province, was so greatly abused by the public who secured these military verifications without any idea of using them for the purposes for which they were issued, that the procedure of checking with the Treasury Department was recommended and approved.

As the year closed, our activities in assisting the Federal Government in Canada's war effort continued without abating, and there was every indication that we should be called on more and more to assist the Federal Government by carrying out investigations of social problems, such as the legal status of foster children, adopted children, children born out of lawful wedlock and subsequently legitimated. There is every indication that an increasingly heavy load will be placed on the staff, and it may be that some of our male trained staff will have to be released to fill specialized positions with the armed Forces. However, I think I am safe in giving my assurance that every member of the staff will do his utmost to assist in Canada's war effort.

EXTRACT FROM ANNUAL REPORT, DIVISION OF
VENEREAL DISEASE CONTROL, 1939.

D. H. WILLIAMS, M.D., DIRECTOR OF DIVISION.

The year 1939 saw further development of the programme of venereal disease control in British Columbia with consolidation of the gains of the previous year. Plans were laid for extension of the activities of the Division on a Province-wide basis to include complete epidemiological, consultative, and educational services.

During 1939 a total of 2,613 new notifications of venereal infections was received by the Provincial Board of Health as compared with 3,054 notifications in 1938, a significant decrease of 14 per cent. Among the new gonorrhœal infections 62 per cent. occurring in persons in the age-group 20 to 29 years emphasizes the need for energetic efforts to protect the young adult citizen. Among the notifications of syphilitic infections a serious delay in diagnosis is reflected by the small number of notifications in the 20 to 29 year age-group, which amounted to only 30 per cent. A decided improvement in reporting by physicians took place during this year, when a more accurate picture of the number of persons under treatment for syphilis resulted in an increase from 30 per cent. notification by private physicians to 75 per cent. Notifications from clinics were 1,420 as compared with 1,004 from physicians.

Clinics at Vancouver, Victoria, New Westminster, Nanaimo, Trail, and Oakalla Prison Farm continued to provide complete diagnostic and therapeutic services. The total attendance was 59,588. There were 4,689 new patients admitted, of which 3,641 were male and 1,048 female. The admissions for venereal infection showed a significant reduction from 2,121 for 1938 to 1,639 this year. Of these, 720 had syphilis and 919 gonorrhœa. During the year 1,667 patients were discharged, leaving a total clinic population at the end of the year of 1,795. For the treatment of syphilis 47,466 injections of arsenical and heavy metal were administered. The epidemiology and welfare service remained limited to the Vancouver and Victoria Clinics. It continued its essential work of case-finding and case-holding. The total interviews were 14,197 and there were 4,606 letters sent to patients.

Structural changes in the Vancouver Clinic converted a run-down, unattractive, structurally inefficient building into a bright, clean, attractive clinic which gave patient and physician a maximum of privacy and facilitated the more efficient management of the clinic. The Rockefeller Foundation awarded fellowships to two physicians, enabling them to receive special training in public health and venereal disease control measures in Eastern Canada and the United States. To complete the medical staff a consultant in Eye, Ear, Nose, and Throat was appointed. During 1939, with the active co-operation of the prison officials, a complete clinical service was provided at Oakalla Prison Farm.

Activities in the field of public-health education were increased substantially and the foundation laid for a sound, long-term programme. To develop this work an educational supervisor was appointed. During the year, 105 lectures were given which reached approximately 11,700 persons. There were 35,834 pieces of educational literature distributed. A library of over 100 volumes was created and new motion pictures purchased.

The policy of assisting physicians in private practice to deal effectively with patients suffering from venereal infection was continued. A total of 1,379 free consultations was provided by mail. Free medication to the extent of 10,933 ampoules of arsenical and 21,270 c.c. of bismuth was distributed. A plan for providing fees, based on the schedule of the Relief Medical Services, was instituted for payment of physicians in those parts of the Province where clinic facilities were not available. This comprised payment for diagnostic or therapeutic services rendered to relief recipients. Eight postgraduate fellowships in General Venereology to be held at the Vancouver Clinic were made available to practising physicians.

With an increase in military activity in the Province early in the year, several conferences were held with officials in Military District No. 11, in order to work out a plan of close co-operation. The advent of war in September hastened these efforts, and at the Dominion Council of Health meeting in October at Ottawa the Division offered the Department of National Defence a complete service in venereology, including clinical, diagnostic, epidemiological, consultative, therapeutic, and educational facilities.

The Division in 1939 continued with its educational programme regarding the highly diseased state of prostitutes being exploited commercially throughout British Columbia. A

policy of vigorous enforcement of sections of the Criminal Code dealing particularly with the exploiters was advocated. This problem was dealt with most realistically in the City of Vancouver early in the year when publicity given to the flagrant violation of the Criminal Code by bawdy-house interests resulted in the Police Commission advocating a policy of suppression of commercialized prostitution. Since then a close liaison between the City of Vancouver Police Department and the Division has been developed. The reduction of new venereal infections in Vancouver for the year gives evidence of the soundness from a public-health view-point of the policy of strict law enforcement.

The details of activities of the Division of Venereal Disease Control, including pertinent statistical and graphical portrayal of these, carry with them evidence of a continuing, aggressive onslaught on the menace of venereal disease and show the early signs of satisfactory future results. These details may be seen by referring to the Annual Report of the Division of Venereal Disease Control for 1939. Reference to the Annual Report, 1939, of the Division of Laboratories will give detailed information relative to laboratory-work done in the Province in connection with diagnosis and treatment of venereal disease.

EXTRACT FROM ANNUAL REPORT OF THE DIVISION OF TUBERCULOSIS CONTROL, 1939.

W. H. HATFIELD, M.D., DIRECTOR OF DIVISION.

The following is a summary of the Annual Report of the Division of Tuberculosis Control, which has been published as a separate document as Volume 10, Appendix 1, of the Bulletin of the Provincial Board of Health:—

The year 1939 was in general a period of consolidation in the work of the Division of Tuberculosis Control. All units of the Division continued to work at full capacity, with each unit playing its part in the planned programme of the Division.

A major change in the organization previously recommended was accomplished towards the end of the year, by the appointment of a Central Accountant to the Division. It is felt that this will greatly add to the efficiency of the Division.

Any tuberculosis control programme must of necessity have a long-range view. One of the first steps to be taken in such a programme is to have the knowledge of where the cases of tuberculosis are in a community. The variety of case-finding methods that have been established throughout British Columbia have played their part well, for to-day British Columbia can report the highest ratio of known cases per death of any place in the world. This index shows the efficiency of the case-finding methods that have been applied. At the end of the year there were registered in the Province 6,401 cases of tuberculosis. This is a ratio of 15.9 cases per death. New cases reported are 1,438. The mortality rate is 72.7 per 100,000 population, which is approximately the same as for the previous year. This death rate includes the total population. The death rate for Indians is 744.3 per 100,000, and when these are removed from the remaining population it gives the remaining population a death rate of 49.2 per 100,000.

The problem of tuberculosis amongst Indians remains in the hands of the Indian Affairs Branch of the Dominion Government, and it is hoped that during the year of 1940 that the Dominion authorities will be able to put into effect greater measures to control this disease amongst this group of the population. In comparing death rates between the various Provinces, it must be borne in mind that British Columbia has two distinct racial groups which contribute to the death rate, namely, the Oriental and the Indian. The Oriental death rate is much higher than the white population and this group is peculiar to British Columbia. In addition, Indian population which has an extremely high death rate raises the death rate for British Columbia more than for any other Province as approximately 25 per cent. of the Indians in Canada reside in British Columbia.

Bed Facilities.—There was a slight increase in patient-days over the previous year. In 1939 there were 234,565 patient-days, compared with 232,152 patient-days for 1938. The total beds available in the Province are 648. During the year, the convalescent unit in Vancouver was closed and the bed accommodation at Tranquille unit increased. It is only by

carefully controlled central administration that this bed accommodation has met the problem of admission throughout the Province. There continues to be a continual pressure throughout all the institutions. The Division anticipates that with the widespread X-ray examination of recruits for the army, there will be an increased call upon the beds, with a possibility of creating an emergent situation. All told, during the year there were 733 patients admitted and every effort was made to maintain the standard of work at the institutions to the highest point of efficiency. To-day there is a great deal more active treatment in tuberculosis than there has been in the past. For example: 11,808 pneumothorax treatments were given to those patients in institutions. General surgery and chest surgery continue to increase, all of which increases the work of the laboratory and X-ray departments. The institutional laboratories did over 25,000 tests and took over 3,500 X-ray films. It is recognized in any tuberculosis programme that there will be a certain number of cases each year that are readmitted for further treatment. The Division has started a programme of complete study of all such cases in an endeavour to keep these readmissions down to the lowest possible point.

Clinics.—Stationary clinics continue to be operated at Victoria, Vancouver, and Tranquille, with four Travelling Units, one covering Vancouver Island, a second covering the Fraser Valley and the Coast area, a third covering the Okanagan and Cariboo, and the fourth in the remaining eastern portion of the Province. All told, these clinics conducted 1,245 sessions and the Travelling Units visited 70 centres; 29,101 chest examinations were done, 5,851 interviews held, and there were 1,910 special consultations. Approximately 10,000 direct contacts of known cases of tuberculosis were examined and laboratories of the Division did over 10,000 laboratory tests on out-patients, and the X-ray units took 28,221 X-rays and did 7,224 fluoroscopic examinations. The tuberculin testing programmes have been reduced in the younger children and increased in the older group; 7,169 children were tuberculin tested. The examination of underground workers continues, with 2,197 such examinations done during 1939. With these examinations, it is felt that the mines are being kept free from tuberculosis, only two cases of silico-tuberculosis were discovered in the mines during 1939. The work of the Vancouver Preventorium continues to be closely affiliated with the Division; herein 40 children are given care. It is to be noted that there is a definite decrease in the number of children needing such care, the number of cases of tuberculosis being discovered amongst the younger children definitely being on the down grade.

In the health educational field, every effort has been made to carry information to all areas throughout the Province. The sound moving pictures have been the most popular in this regard. These pictures have been shown to many thousands of children and many groups of adults in almost every district in the Province. They continue to be in great demand. Exhibits have been held in various districts and many pamphlets are distributed each week. Radio broadcasts have been given from time to time. The Division continues to assist training-schools in the education of student nurses, and the facilities of all units are open to any practising physician for postgraduate studies. The physicians of all units continue to make special studies throughout the year and have contributed to the medical literature in this regard.

The experiment in rehabilitation, which continues as a voluntary activity, has been carried on. Many difficulties have been encountered, but it is hoped that this part of the programme can be further developed with logical conclusions. It is felt that a rehabilitation programme is essential in any fully developed tuberculosis control programme.

One of the difficulties which still continues to be evident is the difficulty in forcing isolation of the infectious case of tuberculosis. Definite regulations are needed in this regard, but it must be borne in mind that such regulations would mean sufficient bed facilities to meet all demands.

In general, it may be said that the tuberculosis programme in British Columbia has been rounded out to provide adequate diagnostic facilities for all areas, and gives the opportunity for modern scientific treatment to all cases of pulmonary tuberculosis. It is not possible for the Division to undertake treatment of the non-infectious non-pulmonary types of tuberculosis. The follow-up work through Social Service and District Nursing Services has been markedly improved. This is an important phase of work, protecting the investment that has been made in treatment and it is an essential part of a case-finding programme. The Division appreciates the great assistance it has received from the Division of Vital

Statistics and from other Divisions of the Provincial Board of Health and other Departments of Government. In addition to this, great support has been received from voluntary agencies and many individuals throughout the Province. This close co-operation from all sources has done a great deal to aid in the development of tuberculosis-work in this Province.

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